REMARKS/ARGUMENTS

Claim 19 was rejected under 35 U.S.C. §112, second paragraph, as being indefinite. Claims 11 to 17 and 21 to 30 were rejected under 35 U.S.C. §102(b) as anticipated by Nimura et al., U.S. Patent No. 5,884,218. Claims 18 to 20 were rejected under 35 U.S.C. §103(a) as obvious over Nimura et al.

The specification and abstract are hereby amended.

Claims 11, 18, 27 are hereby amended. Support for the amendments to claims 11 and 27 may be found in the specification at for example, paragraphs [0030] and [0031]. Support for the amendment to claim 18 may be found in the specification at, for example, paragraph [0012]. Claims 21 to 26 are hereby canceled without prejudice.

Reconsideration of the application in view of the foregoing amendments and following remarks is respectfully requested.

Amendments to the Specification

Applicant hereby amended paragraph [0010] of the specification to more clearly cite to European Patent Publication No. EP-0825418 A2. This document was submitted with an IDS concurrently with the filing of this application. Applicant apologizes for any confusion.

Amendments to the Abstract

The Abstract is hereby amended. The Abstract is in narrative form, does not exceed 150 words and does not contain any legal phraseology. Applicant respectfully submits the Abstract is clear and concise and sufficiently describes the disclosure.

Rejections under 35 U.S.C. §112, second paragraph

Claim 19 was rejected under 35 U.S.C. §112, second paragraph, as being indefinite.

Claim 18 is hereby amended. Claim 19 depends from claim 18. In view of the amendment to claim 18, Applicant respectfully submits claim 19 is clear and definite and distinctly claims the Applicant's invention.

Rejections under 35 U.S.C. §102(b)

Claims 11 to 17 and 21 to 30 were rejected under 35 U.S.C. §102(b) as being anticipated by Nimura et al., U.S. Patent No. 5,884,218. Claims 11 and 27 are in independent form. Claims 12 to 17 are dependent on claim 11. Claims 28 to 30 are dependent on claim 27.

Nimura et al. discloses a position detector 20 which includes an absolute direction sensor 21, a relative direction sensor 22, a distance sensor 23, a car speed sensor 24, as well as a Global Positioning Sensor (GPS) receiver unit 25, a beacon receiver unit 26, and a data transmitter/receiver unit 27. (Col. 7, lines 40 to 47).

Independent Claim 11

As amended claim 11 recites "[a] method for securely determining a position of an object moving along a known course with respect to a distance run by the moving object, comprising steps of:

determining an absolute position of the object with a first confidence interval:

determining a relative position of the object with a second confidence interval;

selecting a smaller confidence interval among the first and second confidence intervals, when the object is moving along the course, with respect to the distance run by the moving object;

determining the location and/or position of the object using the relative position while the second confidence interval is the smaller interval; and

determining the location and/or position of the object using the absolute position while the first confidence interval is the smaller confidence interval. "

Nimura et al. is addressed to a system which is very different from the present invention as claimed, and does not teach any of the limitations of claim 11. In particular, Nimura et al. does not disclose that "a first confidence interval" related to the measurement of an absolute position of an object and "a second confidence interval" related to the measurement of a relative position of the same object are used to select which of the absolute position measurement and the relative position measurement are used to determine the location of the object. Rather, Nimura et al. discloses a GPS device that uses the present position of a vehicle as a start point of a route SP and connects the start point of the route SP to an end point of the route EP automatically. (See,

e.g., col. 22, lines 52 *et seq.*). If a vehicle strays from the route, the route is re-calculated. A present position detector 20 detects the position of the car. Detector 20 includes both an absolute direction sensor 21 and a relative direction sensor 22. The absolute direction sensor 21 detects an absolute bearing of the car while the relative direction sensor 22 represents a deviation of the direction in which the car is traveling from the absolute direction detected by absolute direction sensor 21. Nimura et al. uses both the relative direction sensor 22 and absolute direction sensor 21 to determine a present position of the car and the relative direction sensor 22 is based on the deviation of the absolute direction sensor 21 data. Nimura et al. is not addressed to the same problem as the present invention, i.e., minimizing the error in the position measurement of an object, and clearly does not teach at least the steps of "selecting a smaller confidence interval among the first and second confidence intervals, when the object is moving along the course, with respect to the distance run by the moving object;" "determining the location and/or position of the object using the relative position while the second confidence interval is the smaller interval;" and "determining the location and/or position of the object using the absolute position while the first confidence interval is the smaller confidence interval" recited in claim 11.

Thus, since Nimura et al. does not disclose each and every limitation of claim 11, claim 11 is not anticipated by Nimura et al. Withdrawal of the rejection of claim 11 and claims 12 to 17, dependent on claim 11, under 35 U.S.C. § 102(b) is respectfully requested.

Independent Claim 27

As amended, claim 27 recites "[a] location device for determining a position of an object moving along a known course with respect to a distance run by the moving object comprising:

an absolute position determining system yielding a first confidence interval and having access to a digital mapping of possible trajectories and at least one satellite communication receiver;

a relative position determining system yielding a second confidence interval and detecting a presence of beacons placed along the course; and

means for selecting, when the object is moving along the course, a smaller confidence interval among the first and second confidence intervals with respect to the distance run by the moving object; and

means for determining the position of the object based on an output from one of the absolute position determining system and the relative position determining system, selected based upon having the smaller confidence interval.

As discussed above with respect to claim 11, Nimura et al. is addressed to a very different system than that disclosed and claimed in the instant application. Nimura et al. does not disclose the "means for selecting" and "means for determining" limitations of claim 27 because Nimura et al. does not disclose or teach that confidence intervals associated with relative and absolute position measurements of an object are used to select which of the relative and absolute position measurements are selected for use in calculating the position of the object.

Since Nimura et al. does not disclose each and every limitation of claim 27, claim 27 is not anticipated by Nimura et al. Withdrawal of the rejection of claim 27 and claims 28 to 30, dependent on claim 27, under 35 U.S.C. § 102(b) is respectfully requested.

Rejections under 35 U.S.C. §103(a)

Claims 18 to 20 were rejected under 35 U.S.C. §103(a) as obvious over Nimura et al. Claims 18 to 20 are dependent on claim 11. As discussed above, claim 11 is not anticipated by Nimura et al. For the same reasons as discussed above with respect to claim 11, claims 18 to 20 are not obvious over Nimura et al. Withdrawal of the rejection of claims 18 to 20 under 35 U.S.C. §103(a) is respectfully requested.

CONCLUSION

The present application is respectfully submitted as being in condition for allowance and applicants respectfully request such action.

Respectfully submitted,
DAVIDSON, DAVIDSON & KAPPEL, LLC

By:_____
John S. Economou
(Reg. No. 38,439)

Davidson, Davidson & Kappel, LLC
485 Seventh Avenue
New York, New York 10018
(212) 736-1940